

PATENT

1

2 The invention in which an exclusive property or
3 privilege is claimed are defined as follows:

4

5 1. A method of extending the life of carbon brakes
6 for multiple brake aircraft comprising measuring the speed
7 of the aircraft when braking, measuring the desired
8 braking intensity, comparing the speed and the desired
9 braking intensity to preset values and if both the speed
10 and the braking intensity are below said preset values,
11 disabling at least one of the said carbon brakes during
12 said braking and thereafter selectively disabling other
13 said carbon brakes during succeeding braking
14 applications.

15

16 2. Means for extending the life of carbon brakes for
17 aircraft comprising means for sensing the speed of the
18 aircraft; means for measuring the desired intensity of
19 braking action; means to compare the aircraft speed and
20 desired braking intensity to predetermined values; means
21 for disabling at least one of the brakes upon sensing
22 desired braking intensity and aircraft speed below said
23 predetermined values; means for disabling the other said
24 brakes under like conditions upon successive brake
25 applications; and means for sequencing the successive
26 brake disablements to provide for substantially uniform
27 brake heating.

28

29 3. The method of claim 1 where half the brakes are
30 disabled during each said disabling step.

31

PATENT

1 4. The method of claim 1 where more than half the
2 brakes are disabled during each said disabling step.

3

4 5. The method of claim 1 where the aircraft speed is
5 determined based on wheel speed.

6

7 6. The means of claim 2 where the means for disabling
8 the brakes disable half of said brakes during each brake
9 disablement.

10

11 7. The means of claim 2 where the means for disabling
12 the brakes disable more than half of said brakes during
13 each brake disablement.

14

15 8. The means of claim 2 where means for determining
16 the aircraft speed receive input from means for measuring
17 wheel speed.

18

19 9. The method of claim 1 where the brake temperature
20 is measured.

21

22 10. The means of claim 2 where means are provided to
23 measure the brake temperature and input said reading to
24 the brake disabling means.

25

26 11. Means for extending the life of carbon brakes on
27 multiwheel aircraft comprising a sensor for measuring
28 wheel speed, means for translating measured wheel speed
29 into aircraft speed, means for measuring hydraulic
30 pressure in a brake line, means for comparing the aircraft
31 speed and the hydraulic pressure in said brake line to
32 predetermined maximum values, and means to selectively

PATENT

1 disable at least one of said carbon brakes when said
2 aircraft speed and hydraulic pressure are below said
3 maximum values.

4

5 12. The means of claim 11 where a said brake is
6 disabled by an antiskid control device.

7

8 13. A method of extending the life of carbon brakes
9 for multiple brake aircraft comprising measuring the speed
10 of the aircraft at the time the brakes are applied,
11 measuring the desired braking intensity, comparing the
12 speed and the desired braking intensity to preset values
13 and if both the speed and the braking intensity are below
14 said preset values at the time the brakes are applied,
15 disabling at least one of the said carbon brakes during
16 said braking application and selectively disabling other
17 said carbon brakes during succeeding braking applications
18 when the said speed and desired braking intensity are
19 below the said preset values.

20

21 14. Means for extending the life of carbon brakes for
22 aircraft comprising means for sensing the speed of the
23 aircraft; means for determining the desired intensity of
24 braking action by measuring the fluid pressure in the
25 brake line; means to compare the aircraft speed and fluid
26 pressure to predetermined values; means for disabling at
27 least one of the brakes upon sensing fluid pressure and
28 aircraft speed below said predetermined values; means for
29 disabling other said brakes under like conditions upon
30 successive brake applications; means for sequencing the
31 successive brake disablements to provide for substantially

PATENT

1 uniform brake heating; and means for removing the brake
2 disable signal when the fluid pressure in the brake line
3 exceeds said predetermined value or a higher value such
4 that all the said brakes are applied.